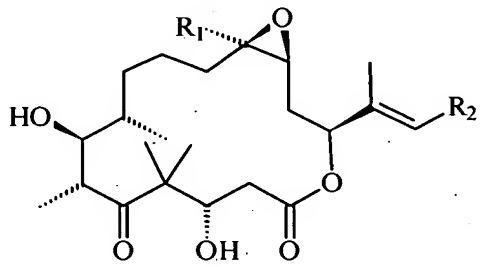
Amendments to the Claims

Listing of Claims:

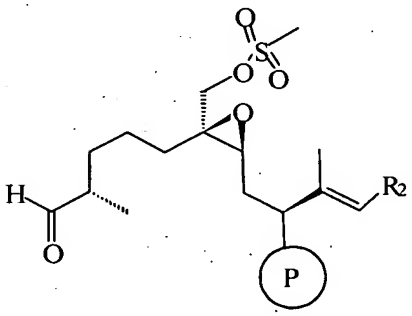
Claim 35 (new): A process for the preparation of epothilone derivatives of formula 9:



(9)

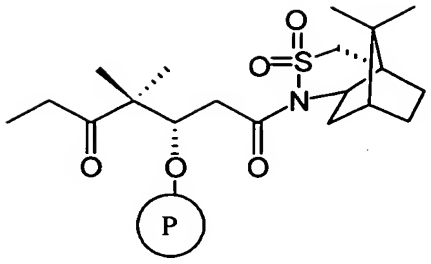
wherein
R1 is methyl;
R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene nucleus;
comprising the steps of:

a) reacting a compound of formula 1:



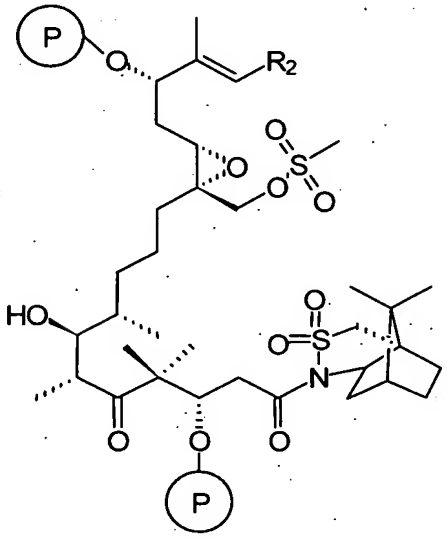
(1)

wherein R2 has the meanings given above; and (P) is an alcohol protecting group;
with a compound of formula 2:



(2)

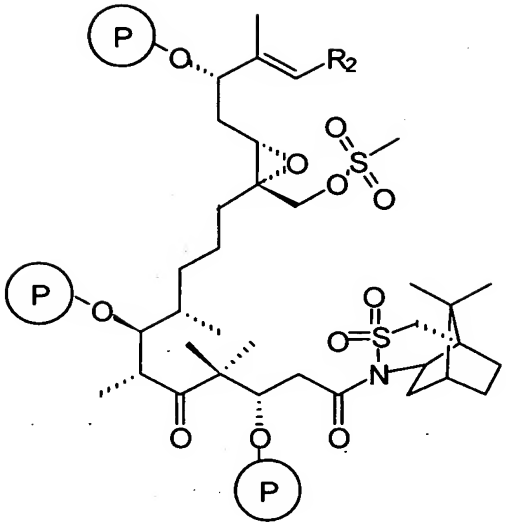
in the presence of a Lewis acid and addition of a base in an inert solvent to yield a compound of formula 3:



(3)

wherein R2 and  have the above given meanings;

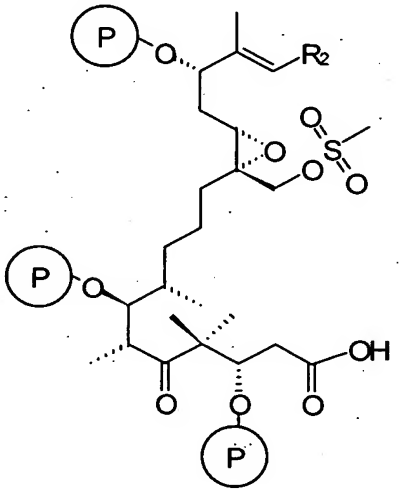
b) the reacting compound of formula 3 in the presence of a silyl-ether forming compound to produce the compound of formula 4:



(4)

wherein R2 and P have the meanings given above;

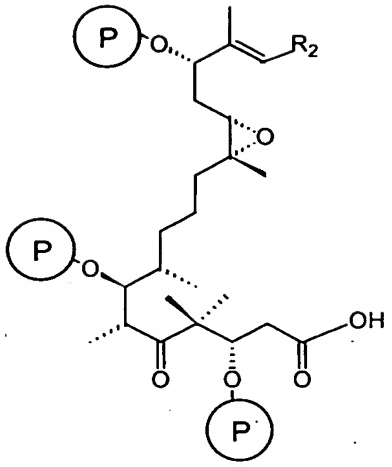
c) converting the compound of formula 4 to produce a compound of formula 5:



(5)

wherein R2 and P have the meanings given above;

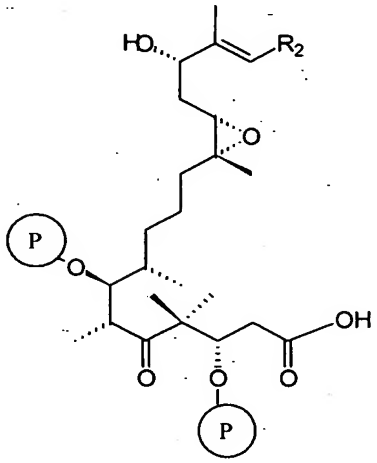
d) reacting compounds of above formula 5 with a reducing reagent in an inert solvent to yield a compound of formula 6:



(6)

wherein R2 and the P above have given meanings;

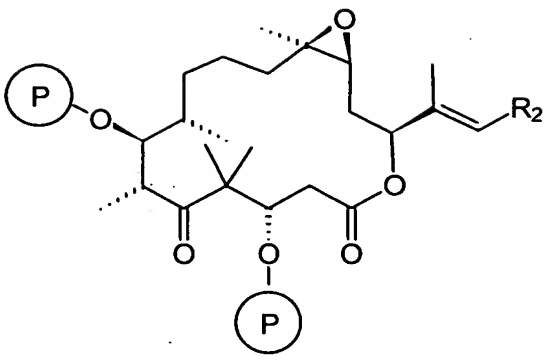
e) hydrolysing the compound of formula 6, to produce a compound of formula 7:



(7)

wherein R2 and P have the above given meanings;

f) macrolactonizing a compound of formula 7, to produce the epothilone derivative of formula 8:



(8)

wherein R2 and (P) have has the above defined meanings; and

g) treating the compound of formula 8 with HF·pyridine in an inert solvent to produce the epothilone derivatives of formula 9.

Claim 36 (new): The process according to claim 35, wherein in step a) the compound of formula 1 is reacted with the compound of formula 2 in the presence of TiCl4 and Hünig base (iPr2Net) in dichloromethane.

Claim 37 (new): The process according to claim 35, wherein in step b) the compound of formula 3 is reacted with a silyl-ether forming compound in the presence of 2,6-lutidine in dichloromethane.

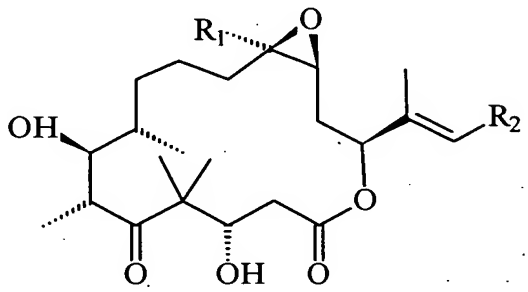
Claim 38 (new): The process according to claim 35, wherein in step c) the compound of formula 4 is converted by splitting off the chiral auxillary group with TBAOH/H2O2 in DME or LiO2H in THF/MeOH/H2O.

Claim 39 (new): The process according to claim 35, wherein in step d) the compound of formula 5 is reacted with LiBHEt3 in THF.

Claim 40 (new): The process according to claim 35, wherein in step e) the compound of formula 6 is hydrolysed with TASF or HF pyridine in an inert solvent.

Claim 41 (new): The process according to claim 35, wherein in step f) the compound of formula 7 is macrolactonized by treating with Et3N and 2,4,6-trichlorobenzoyl chloride and subsequently reacted with a solution of 4-DMAP in toluene.

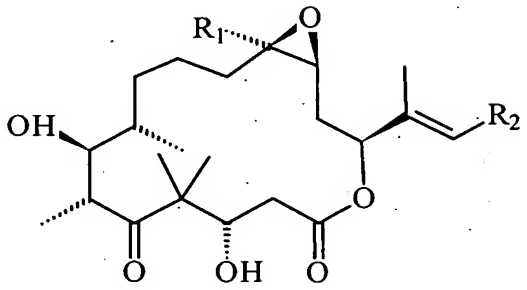
Claim 42 (new): A compound of formula 9:



(9)

wherein R1 is methyl and R2 is an unsubstituted or substituted aryl and salts with metal cations.

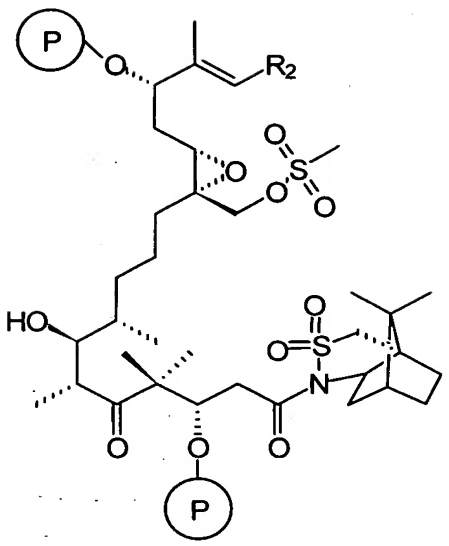
Claim 43 (new): A compound of formula 9:



(9)

wherein R1 is methyl and R2 is an unsubstituted or substituted phenyl and salts with metal cations.

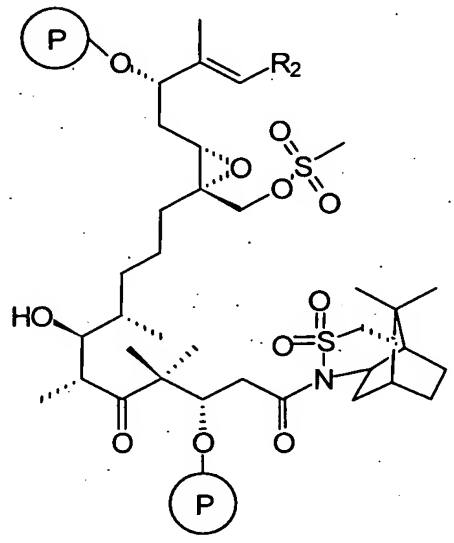
Claim 44 (new): A compound of formula 3:



(3)

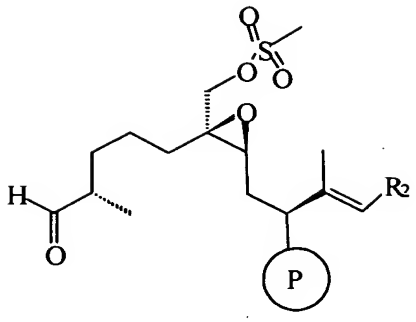
wherein R2 is an unsubstituted or substituted phenyl and (P) is an alcohol protecting group.

Claim 45 (new): The process for making a compound of formula 3:



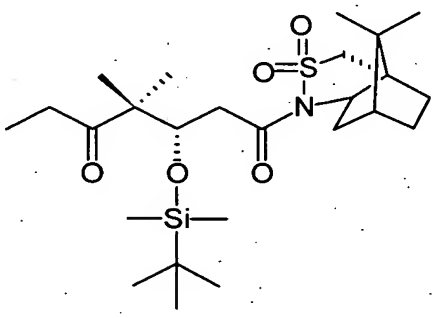
(3)

wherein R2 is an unsubstituted or substituted phenyl, and (P) is an alcohol protecting group comprising the steps of a) reacting a compound of formula 1:



(1)

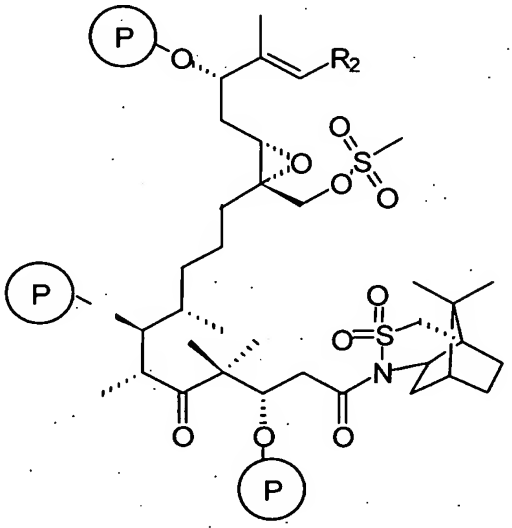
wherein R2 and P have the above given meanings;
with a compound of formula 2:



(2)

in the presence of a Lewis acid and addition of a base in an inert solvent.

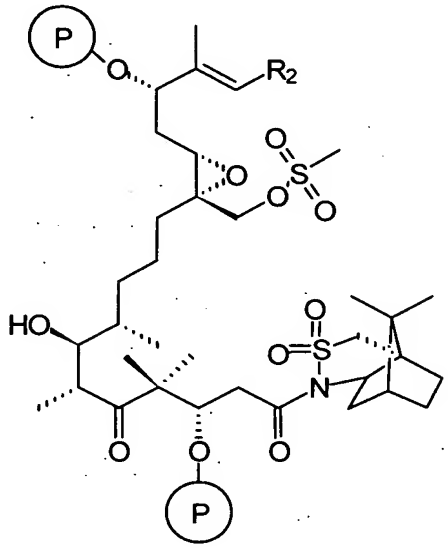
Claim 46 (new): A compound of formula 4:



(4)

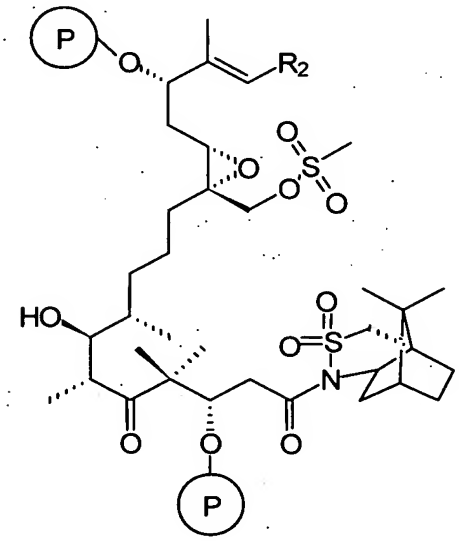
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring and (P) is an alcohol protecting group.

Claim 47 (new): Process for making a compound of formula 4:



(4)

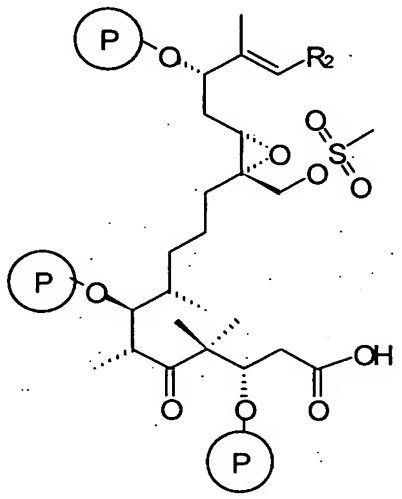
comprising the step of reacting a compound of formula 3:



(3)

wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring and (P) is an alcohol protecting group with a silyl-ether forming compound.

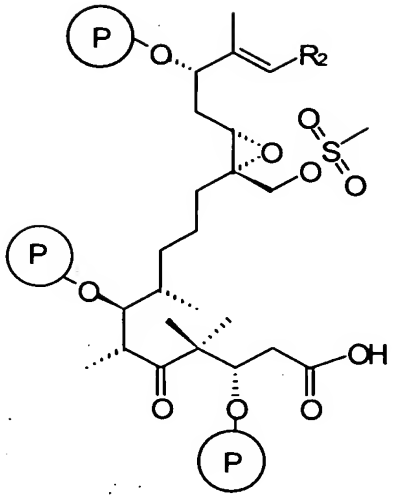
Claim 48 (new): A compound of formula 5:



(5)

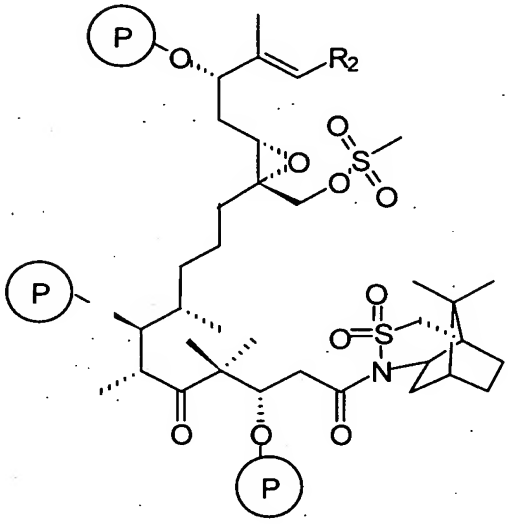
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fushed to a benzene ring and (P) is an alcohol protecting group.

Claim 49 (new): A process for making a compound of formula 5:



(5)

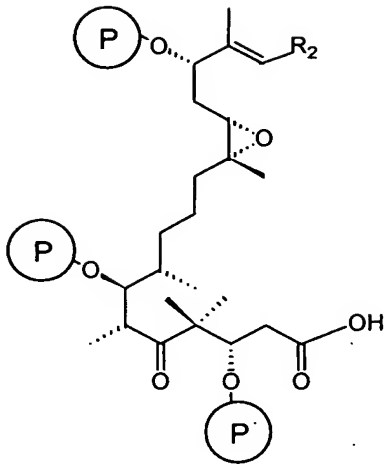
comprising the step of reacting a compound of formula 4:



(4)

with TBAOH/H2O2 in DME or LiO2H in THFMeOH//H2O.

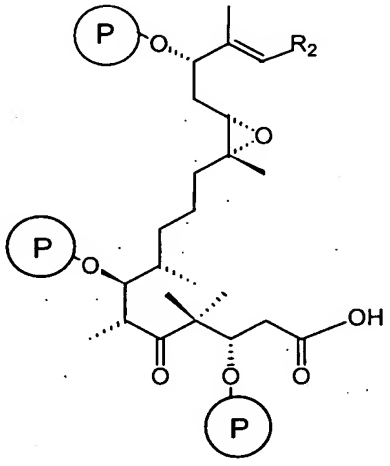
Claim 50 (new): A compound of formula 6:



(6)

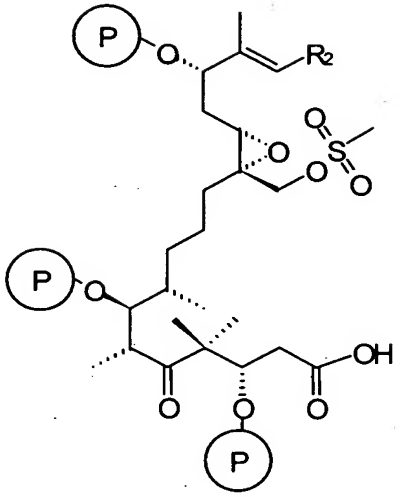
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring and (P) is an alcohol protecting group..

Claim 51 (new): A process for making a compound of formula 6:



(6)

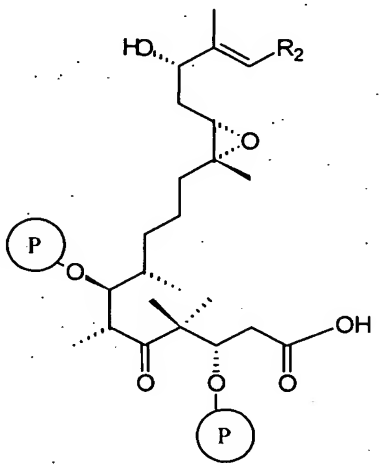
comprising the step of reacting a compound of formula 5:



(5)

with a reducing reagent in an inert solvent.

Claim 52 (new): A compound of formula 7:

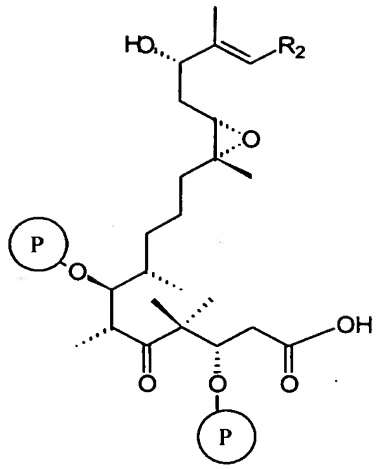


(7)

wherein R2 is an unsubstituted or substitutyed aryl; an unsubstituted or substituted heteroaryl or an unsubstituted or substituted heterocyclic radical fused to a benzene ring and

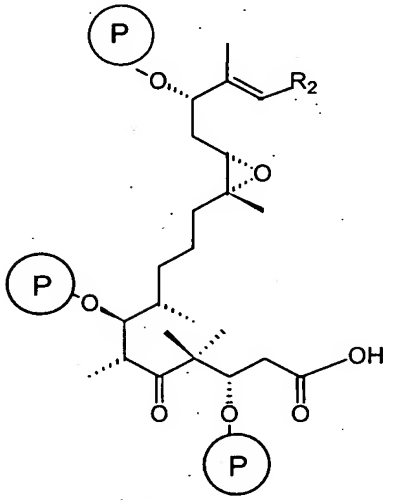
(P) is an alcohol protecting group.

Claim 53 (new): A process for the preparation of a compound of formula 7:



(7)

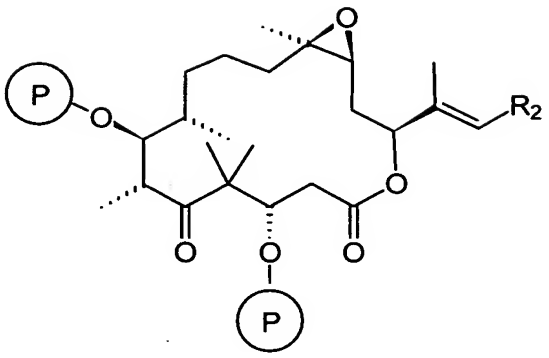
comprising the step of hydrolysing the compound of formula 6:



(6)

with a desilylation reagent, in an inert solvent.

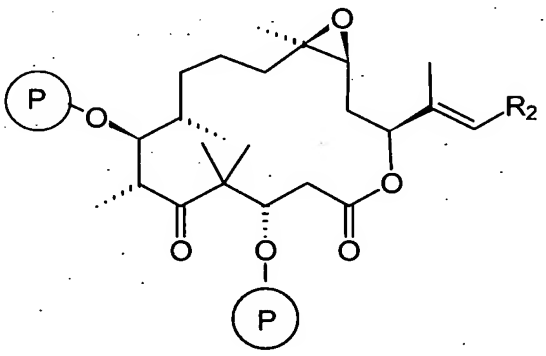
Claim 54 (new): A compound of formula 8:



(8)

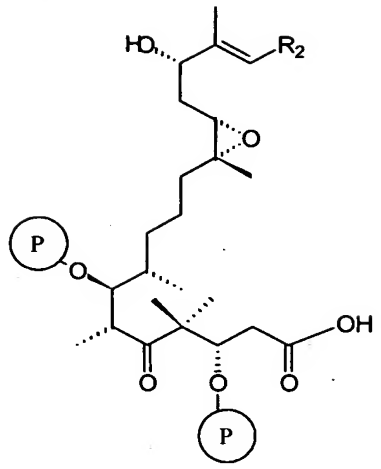
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring and (P) is an alcohol protecting group.

Claim 55 (new): A process for making a compound of formula 8:



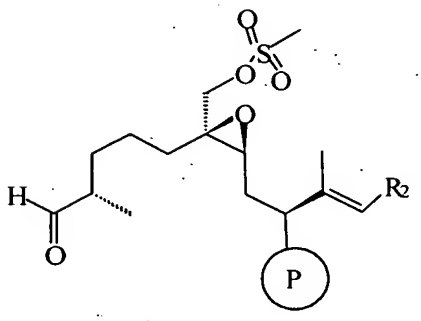
(8)

comprising the step of macrolactonizing a compound of formula 7:



(7)

Claim 56 (new): A compound of formula 1:

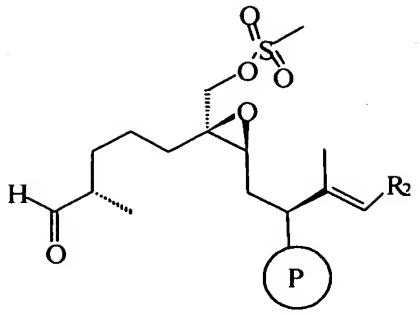


(1)

wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene nucleus; and

(P) is an alcohol protecting group.

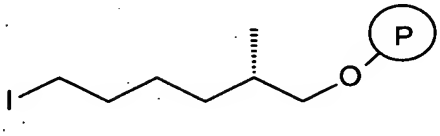
Claim 57 (original): A process for making a compound of formula 1:



(1)

comprising the steps of:

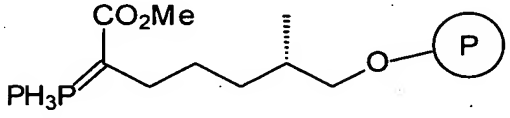
a) reacting a compound of formula 10:



(10)

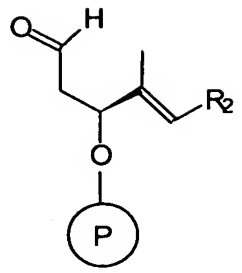
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene nucleus; and

is an alcohol protecting group with PPH3 and subsequently with KHMDS in an inert solvent, and treating with CH3CO2Cl to obtain a compound of formula 11:



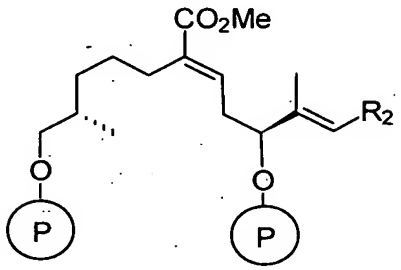
(11) ;

b) reacting the compound of formula 11 with a compound of formula 12



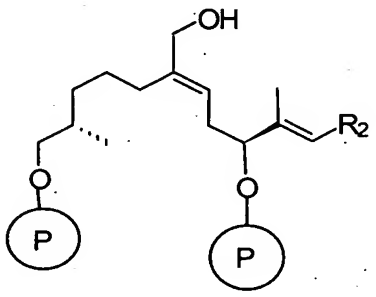
(12)

in an inert solvent, to obtain a compound of formula 13:



(13) ;

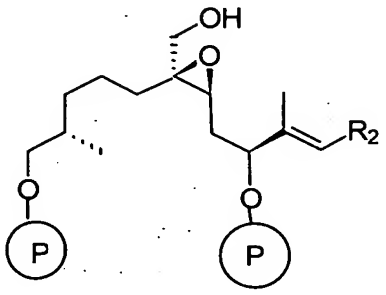
c) reducing a compound of formula (13) to obtain a compound of formula 14



(14)

wherein R2 and Ⓟ have the above meanings;

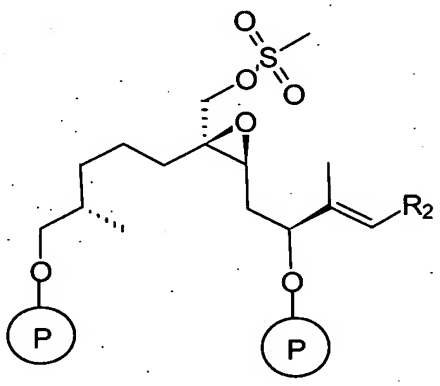
d) epoxidating the compound of formula XIV to obtain a compound of formula 15:



(15) ;

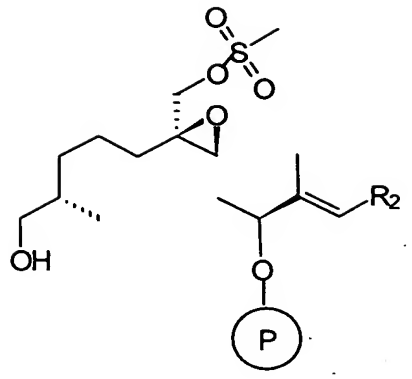
wherein R2 and Ⓟ have the above meanings;

e) reacting the compound of formula 15 with mesylate chloride in the presence of triethylamine (Et_3N) in an inert solvent, to produce a compound of formula 16



(16) ;

f) treating the compound of formula 16 with an organic acid in an inert solvent, to obtain a compound of formula 17

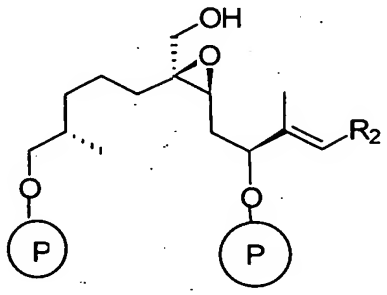


(17)

wherein R2 and  have the above given meanings; and

g) oxidizing the compound of formula 17 to produce the compound of formula 1.

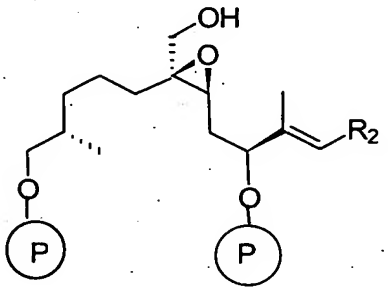
Claim 58 (new): A compound of formula 15:



(15)

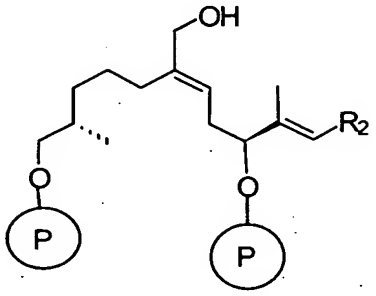
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring; a  is an alcohol protecting group.

Claim 59 (new): A process for making a compound of formula 15:



(15)

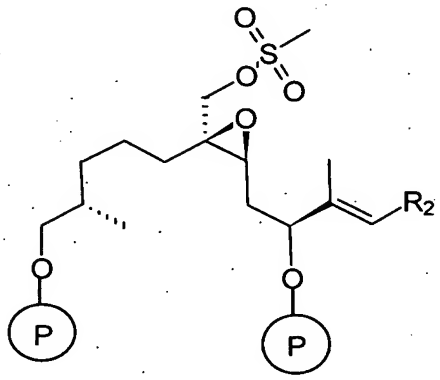
comprising the steps of epoxidating the compound of formula 14:



(14)

to produce a compound of formula 15.

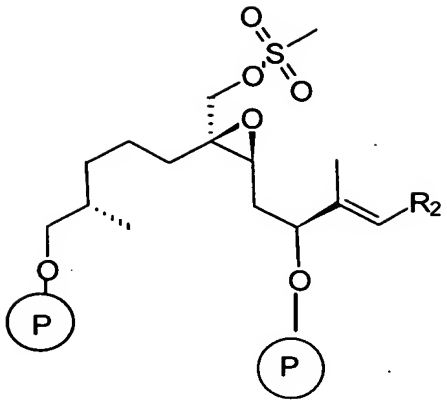
Claim 60 (new): A compound of formula 16:



(16

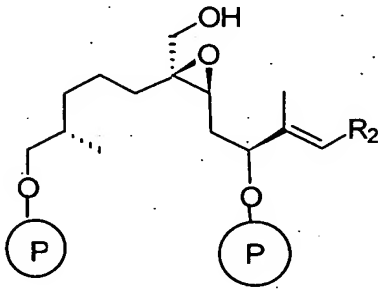
wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring; a (P) is an alcohol protecting group.

Claim 61 (new): A process for making a compound of formula 16:



(16)

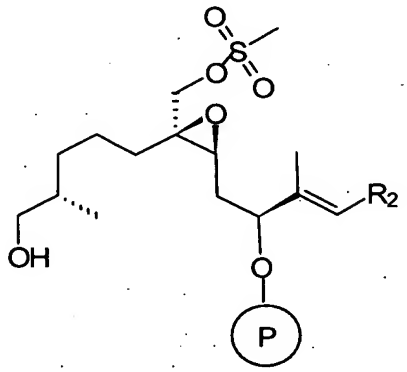
comprising the step of reacting a compound of formula 15:



(15)

with mesylate chloride in the presence of triethylamine in an inert solvent to obtain a compound of formula 16.

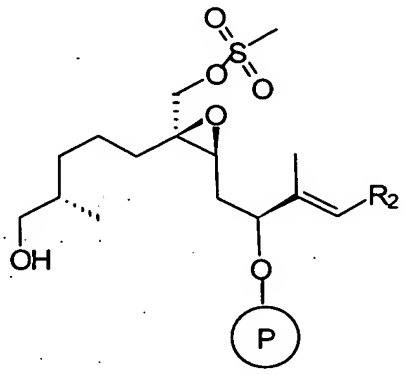
Claim 62 (new): A compound of formula 17:



(17)

wherein R2 is an unsubstituted or substituted aryl; an unsubstituted or substituted heteroaryl; or an unsubstituted or substituted heterocyclic radical fused to a benzene ring; a (P) is an alcohol protecting group.

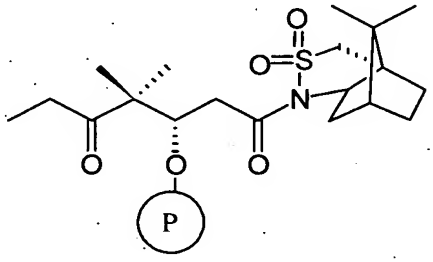
Claim 63 (new): A process for making a compound of formula 17:



(17)

comprising the step of treating a compound of formula 16 with an organic acid in an inert solvent, and hydrolyzing the protecting group to obtain a (P) compound of formula 17.

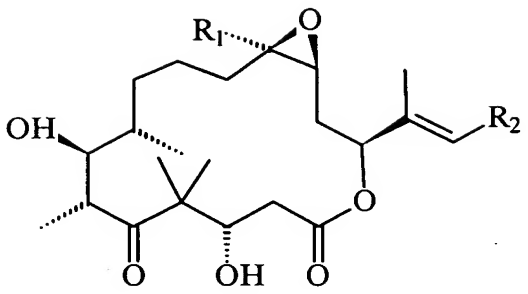
Claim 64 (new): A compound of formula 2:



(2)

wherein (P) is an alcohol protecting group.

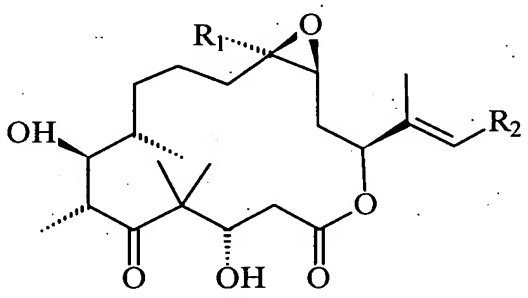
Claim 65 (new): A method of treating a warm-blooded animal suffering from a proliferative disease, comprising administering a compound of the formula 9:



(9)

wherein R2 is an unsubstituted or substituted aryl radical or a pharmaceutically acceptable salt thereof, to said warm-blooded animal in an amount that is sufficient for said treatment.

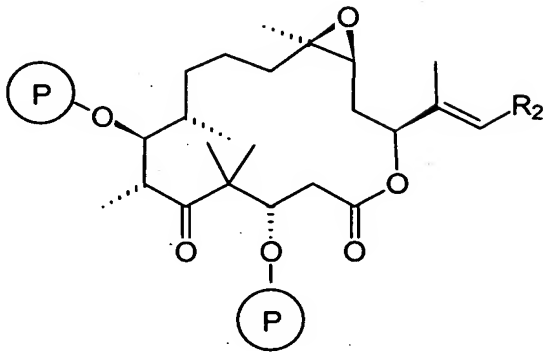
Claim 66 (new): A pharmaceutical composition, comprising an effective amount of a compound of formula 9



(9)

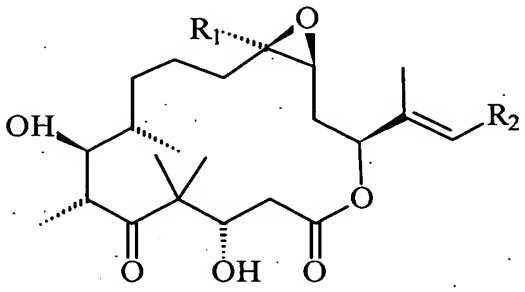
wherein R2 is an unsubstituted or substituted aryl radical which is effective for the treatment of said cancer disease, together with at least one pharmaceutically acceptable carrier.

Claim 67 (new): Use of a compound of formula 8



(8)

for preparing a compound of formula 9



(9)

for medical treatment.

Claim 68 (new): The process according to claim 35 further comprising converting the compound of formula 9 to a salt.